

Notice of Allowability

Application No.
10/089,888
Examiner
Jeanne A. Di Grazio

Applicant(s)
NISHIYAMA ET AL.
Art Unit
2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to Response of April 15, 2004.
2. The allowed claim(s) is/are 85 and 86.
3. The drawings filed on 05 April 2002 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date ____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date ____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date ____
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other ____.

DETAILED ACTION

Claims

Claims 1-35, 41-82 and 87-97 are withdrawn from consideration per Amendment of April 15, 2004. Claims 83 and 84 are cancelled per Amendment of April 15, 2004. Claims 36-40 have been previously cancelled by Preliminary Amendment of April 29, 2002. Claims 85 and 86 remain.

In the Title

The Examiner acknowledges Applicant's amendment to the title -- METHOD FOR MANUFACTURING AN IN-PLANE ELECTRIC FIELD MODE LIQUID CRYSTAL ELEMENT --

Drawings

The Examiner acknowledges Applicant's Figure 24.

Allowable Subject Matter

Claims 85 and 86 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 85, relevant prior art of record did not disclose, alone or in combination, a method for manufacturing an in-plane electric field mode liquid crystal element, comprising the step of removing predetermined portions of an orientation film by stripping, by rubbing, a predetermined portion of the orientation film on electrodes formed on one or both substrates.

The above steps result in a novel method of removing portions of an orientation film for an in-plane electric field mode liquid crystal element.

Typically, a step of rubbing an orientation film is performed to impart an initial orientation to a liquid crystal material. Typically, a step of stripping part of an orientation film is performed by a photoresist or other means to remove part of an orientation film. The invention as claimed specifies that the stripping step is performed by rubbing. The invention as claimed equates a step of stripping with a step of rubbing. The current prior art of record fails to teach or to fairly suggest a step of removing (by stripping) part of an orientation film by rubbing the orientation film.

Relevant art US Patent 5,894,050 (issued to Camps et al.) discloses a method of manufacturing an optical component where a substrate including an orientation layer are both removed by applying a slight pressure. Camp does not, however, teach how that slight pressure is achieved. The recitation “rubbing” means a back and forth motion that introduces friction and pressure and this, in the context of removal, is not taught by Camps.

Relevant art US Patent 5,796,458 (issued to Koike et al.) discloses the step of rubbing an alignment film with a resist through the use of a rubbing roller in one direction and then removing the resist from the alignment film. Koike does not teach or suggest rubbing as a method of removal of an alignment film.

United States Patent 6,266,121 B1 (issued to Shigeta et al.) discloses a liquid crystal display element and method of manufacturing the same and teaches a step of removing either an alignment control layer or an insulating layer and alignment control layer from a spacer by stripping a second polymeric material. No mention is made of stripping by rubbing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289. The examiner can normally be reached on M-F.

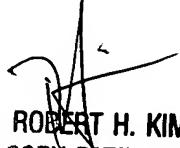
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio

Robert Kim, SPE

Patent Examiner
Art Unit 2871



ROBERT H. KIM
PRIMARY PATENT EXAMINER
ELECTRONIC BUSINESS CENTER 2800